

tional cordless handsets. In this case central processor 11 will still drive the auxiliary display 31 through the video interface 15, and video interface 15 may be housed in docking display unit 30, further reducing the size of detachable handset unit 20.

FIG. 5 shows docking display unit 30 mounted on the floor of a vehicle 70. The bottom end of a pedestal 60 is attached to the vehicle floor 70. Clamps 61 are attached to the top end of pedestal 60. Docking display unit 30 can be removably mounted on pedestal 60 by sliding into clamps 61. Alternatively, docking display unit 30 may be fixed-mounted on pedestal 60 using bolts or other conventional methods. Detachable handset unit 20 can then be docked in docking display unit 30 in the same manner as in the other applications described hereinbefore.

The ordinarily skilled artisan should now appreciate that in this way a portable device for computing, communication and/or entertainment device, can be created that has a detachable handset unit. When mated with a docking display unit, the detachable handset unit becomes the controller for the entire portable computing, communication and entertainment device. The detachable handset unit is in a smaller housing that is dimensioned for handheld grasping, and is sized to be carried in a pocket like an average cell phone. The docking display unit carries an auxiliary, larger display and other components. The central processor, carried in the detachable handset unit, and being used to operate the docking display unit, must have enough processing power to adequately perform functions of an entire portable computing, communication and entertainment device, and not just the functions of a wireless phone. Examples of commercially available processors adequate for this task include the Intel StrongARM processor, the models SH-3 and SH-4 processors from Hitachi American, Ltd. of Brisbane, Calif., and the model 4100 RISC processor from NEC America, Inc. of Irving, Calif.

As technology advances in the future, the Pentium processor from Intel, used in most laptop computers, may be used in other embodiments of the current invention. The other components used in device 10 can be similar to those employed by traditional computing devices, communication devices and entertainment devices. Typical of these other components are: liquid crystal displays of small and large sizes from Optrex America Inc. of Detroit, Mich., and Seiko Instruments USA, Incorporated of Torrance, Calif.; memory chips from Micron Technologies, Inc. of Boise, Id.; VLSI Technologies wireless communication chips available from Philips North America in Atlanta, Ga., power supply chips from Analog Devices Inc. of Norwood, Mass., and pen-input panels from MicroTouch Systems, Inc. of Methuen, Mass.

Device 10 as described hereinbefore will require operating system software such as Microsoft Windows or WindowsCE. Off-the-shelf application software such as Microsoft Outlook, PocketWord, etc. can be used for various tasks. Alternatively, the Java software platform from Sun Microsystems, Inc. of Palo Alto, Calif., can be implemented in device 10. In this instance, Java applets can be downloaded into device 10 from the Internet via wireless communication circuit 21 or via wired communication circuit 33.

Inasmuch as the present invention is subject to variations, modifications and changes in detail, some of which have been expressly stated herein, it is intended that all matter described throughout this entire specification or shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. It should thus be evident that a device constructed according to the concept of the present invention, and reasonably equivalent thereto, will accomplish the objects of the present invention and otherwise substantially improve the art of devices for mobile computing, communication and entertainment.

What is claimed is:

1. A portable processing device comprising:

a detachable portable unit sized for handheld grasping and including a central processor and a plurality of first circuits, said processor controlling the operation of said first circuits, and said first circuits including at least a video interface, a communication interface and a data input interface;

a portable docking display unit dimensioned substantially larger than said detachable portable unit, said docking display unit including a first display and a plurality of second circuits, said plurality of second circuits not including a central processor and including a video interface, and a data input interface, and wherein said central processor controls the operation of at least one of said second circuits and said first display when said detachable portable unit is docked with said docking display unit;

and the docking display unit is fully operable only when the detachable portable unit is docked thereto.

2. A device, as set forth in claim 1, wherein control signals from the central processor are coupled by means of a first electrical connector provided on the detachable portable unit and said docking display unit further includes a second electrical connector for removably engaging said first electrical connector when said detachable portable unit and said docking display unit are docked.

3. A device, as set forth in claim 1, wherein said detachable portable unit further includes at least one of a memory, a wireless communication circuit, a first microphone, a first speaker, and a power supply.

4. A device, as set forth in claim 1, wherein detachable portable unit includes a first speaker and microphone and said docking display unit further includes a second speaker and a second microphone.

5. A device, as set forth in claim 1, wherein said docking display unit includes a first pen-input panel and said detachable portable unit includes a second pen-input panel.

6. A device, as set forth in claim 1, wherein said docking display unit is mounted in a vehicle.

7. A device, as set forth in claim 1, wherein said detachable portable unit includes a first keyboard and said docking display unit includes a second keyboard.

8. A device, as set forth in claim 1, wherein said detachable portable unit includes a connection for an external headphone.

9. A device, as set forth in claim 1, wherein said detachable portable unit includes at least one of an optical transmitter and an optical transceiver.

10. A portable processing device comprising:

a detachable portable unit sized for handheld grasping and including an application processor and a plurality of first circuits, said processor controlling the operation of said first circuits, and said first circuits including at least a video interface, a communication interface and a data input interface;

a portable docking display unit dimensioned substantially larger than said detachable portable unit, said docking display unit including a first display and a plurality of second circuits, said plurality of second circuits not including an application processor and including a video interface, and a data input interface, and wherein said application processor controls the operation of at least one of said second circuits and said first display when said detachable portable unit is docked with said docking display unit;